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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/881,620 | 06/14/2001 | Martin Richardson | UCF-287 | 9612 |

7590 04/01/2003

Law Offices of Brian S. Steinberger
101 Brevard Avenue
Cooca, FL 23717

[REDACTED] EXAMINER

THOMAS, COURTNEY D

[REDACTED] ART UNIT

[REDACTED] PAPER NUMBER

2882 *Rermailed*
DATE MAILED: 04/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.



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| 09/881,620 | 06/14/2001 | Martin Richardson | UCF-287 | 9612 |

7590 06/19/2002

Law Offices of Brian S. Steinberger
101 Brevard Avenue
Cooca, FL 23717

EXAMINER

PORTA, DAVID P

ART UNIT

PAPER NUMBER

2882

DATE MAILED: 06/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|------------------------|---------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 09/881,620 | RICHARDSON, MARTIN |
| | Examiner | Art Unit |
| | David P. Porta | 2882 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-42 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-42 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 14 June 2001 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 . | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 4, 5, and 10-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claims 4 and 5 an apparent distinction is being made between EUV and XUV. It is the understanding of the examiner that these both refer to "extreme ultraviolet radiation". The examiner is not aware of a difference between these wavelength emissions. In claims 10-13, it appears that these claims are meant to depend from claim 9 instead of claim 7 due to the antecedence for "metallic chloride".

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in–
(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

4. Claims 1-6, 9-10, and 27-28 are rejected under 35 U.S.C. 102(e) as being anticipated by Foster et al. Foster et al. discloses a method of producing EUV or X-rays

comprising forming a metallic solution and passing it into a target source, and irradiating it with a laser to produce debris free emissions. In column 10, Foster et al. discloses that the target includes Zinc Chloride and forms micropellets (lines 13-25).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 7, 8, 11-26, and 29-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Foster et al. Foster et al. discloses all of the elements of applicant's claimed invention except for the specific additive, the size of the droplets, and the laser beam size being the same as the droplet size. Foster et al. clearly teaches that the solution can be selected to « control the emission spectrum » (column 10, lines 22-24). Official Notice is taken that the metallic additives set forth in the claims are well known equivalents to Zinc Chloride, and it would have been obvious to one of ordinary skill in the art to employ any of these motivated by the benefits to controlling the spectrum as discussed by Foster et al. While specific sizes of droplets are not discussed, the sizes set forth in the claims are within the definition of micropellets set forth by Foster et al. Similarly, Foster discusses shaping the laser beam, and having micropellets, but fails to disclose that the laser beam has the same diameter as the micropellets. Given the size of micropellets and laser beams, it would have been obvious to one of ordinary skill in the art to match the sizes motivated by the inherent benefits to increased efficiency.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kepros and Dixon et al. disclose laser plasma X-ray sources.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David P. Porta whose telephone number is 703-308-4852. The examiner can normally be reached on Mon-Thurs, 6:30-17:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on 703-305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



David P. Porta
Primary Examiner
Art Unit 2882

DPP
June 17, 2002